Bellwork: 2/25/13

Use synthetic division and the given factor to COMPLETELY FACTOR the polynomial.

$(2x^3+11x^2-x-30)$ divided by $(x+2)$

-2 | 2 11 −1 −30

↓ −4 −14 30

2 7 −15 | 0

$2x^2+7x-15$

$(2x^2+10x)(3x-15)$

$2x(x+5)-3(x+5)$

$(x+5)(2x-3)$

$(2x-3)(x+5)(x+2)$

Page 1

16) $x = 4, 2, -3, 0$

$x(x-4)(x-2)(x+3)$

$x(x^2-6x+8)(x+3)$

$x(x^3-6x^2+8x+3x^2-18x+24)$

$x(x^3-3x^2-10x+24)$

$y = x^4-3x^3-10x^2+24x$

Page 2

21) $x^3+3x^2-13x-15$; $(x+5)$

-5 | 1 3 −13 −15

+↓ −5 10 15

1 −2 −3 | 0

x^2-2x-3

$(x+1)(x-3)(x+5)$

Section 1: # 12, 13

Section 2: # 17, 19, 21

Section 3 # 12, 13

Section 4 # 23, 24